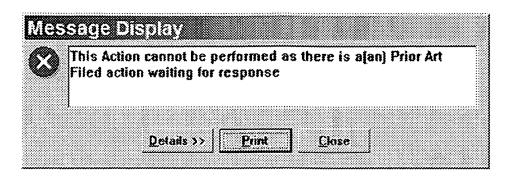
Application Number		SEARCH			
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IDS	arance for App	plication [10/6642	1		.
	arance for App	olication [10/6642	1		
IDS	Content	Mailroom Date	Entry Number	IDS Review	Reviewer
IDS			Entry		Reviewer 12-16-2004 13:56:16 gtrammell



Database : A_Geneseq_21:*
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

		ક				
Result		Query				
No.	Score	Match	Length	DB	ID	Description
			-			
1	1298	100.0	254	4	AAB47522	Aab47522 (R)-2-oct
2	944	72.7	254	4	AAB49773	Aab49773 Protein w
3	586.5	45.2	257	7	ADF06077	Adf06077 Bacterial
4	582.5	44.9	248	6	ADB06934	Adb06934 Alloiococ
5	582.5	44.9	281	6	ADB06936	Adb06936 Alloiococ
6	574.5	44.3	246	8	ADN17584	Adn17584 Bacterial
7	505.5	38.9	261	6	ABU29919	Abu29919 Protein e
8	498.5	38.4	261	5	AAE20115	Aae20115 Lactobaci
9	496.5	38.3	261	9	ADZ77293	Adz77293 Bacillus
10	495.5	38.2	261	9	ADZ77291	Adz77291 Bacillus
11	495.5	38.2	261	9	ADZ77289	Adz77289 Bacillus
12	495.5	38.2	261	9	ADZ77283	Adz77283 Bacillus
13	494.5	38.1	261	3	AAY96271	Aay96271 B. subtil
14	494.5	38.1	261	3	AAY54424	. Aay54424 Amino aci

```
RESULT 1
AAB47522
ID
     AAB47522 standard; protein; 254 AA.
XX
AC
     AAB47522;
XX
DT
     04-DEC-2001 (first entry)
XX
DE
     (R)-2-octanol dehydrogenase.
XX
KW
     (R)-2-octanol dehydrogenase; ketone; alcohol; beta-NAD; co-enzyme;
KW
     oxidize; optical isomer; (R)-2-octanol; 4-haloacetoacetate ester;
KW
     (S)-4-halo-3-hydroxybutyrate ester; HMG-CoA reductase inhibitor;
KW
     D-carnitine; (R)-propoxybenzene.
XX
OS
     Pichia finlandica.
XX
PN
     WO200161014-A1.
XX
     23-AUG-2001.
PD
XX
PF
     15-FEB-2001; 2001WO-JP001082.
XX
PR
     16-FEB-2000; 2000JP-00043506.
PR
     08-DEC-2000; 2000JP-00374593.
XX
PΑ
     (DAIL ) DAICEL CHEM IND LTD.
XX
ΡI
     Kudoh M, Yamamoto H;
XX
DR
     WPI; 2001-596701/67.
DR
     N-PSDB; AAH43472.
XX
PT
     (R)-2-octanol dehydrogenase for producing intermediates for HMG-CoA
PT
     reductase inhibitors or D-carnitine.
XX
PS
     Claim 9; Page 83-85; 97pp; Japanese.
XX
CC
     This sequence represents (R)-2-octanol dehydrogenase which has the
CC
     following characteristics: (1) produces ketones by oxidizing alcohol
CC
     using beta-NAD as a co-enzyme; and produces alcohols by reducing ketones
CC
     using beta-NADH as a co-enzyme; and (2) preferentially oxidizes the
CC
     optical isomer (R)-2-octanol; and reduces 4-haloacetoacetate ester to
CC
    produce (S)-4-halo-3- hydroxybutyrate ester. (S)-4-halo-3-hydroxybutyrate
CC
    esters are useful as intermediates for HMG-CoA reductase inhibitors or D-
CC
     carnitine. (R)-propoxybenzene derivatives are particularly useful as
CC
     intermediates for optical isomers of ofloxane ((S)-(-)-9-fluoro-3-methyl-
CC
     10-(4-methyl-1- piperazinyl)-7-oxo-2,3-dihydro-7H-pyrido(1,2,3-de)(1,4)
CC
    benzoxadin- 6-carboxylic acid)
XX
SQ
     Sequence 254 AA;
  Query Match
                          100.0%; Score 1298; DB 4; Length 254;
  Best Local Similarity
                          100.0%; Pred. No. 2.9e-119;
 Matches 254; Conservative
                                 0; Mismatches
                                                   0; Indels
                                                                     Gaps
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Db
          1 MSYNFHNKVAVVTGALSGIGLSVAKKFLOLGAKVTISDVSGEKKYHETVVALKAQNLNTD 60
         61 NLHYVQADSSKEEDNKKLISETLATFGGLDIVCANAGIGKFAPTHETPFDVWKKVIAVNL 120
Qу
            61 NLHYVQADSSKEEDNKKLISETLATFGGLDIVCANAGIGKFAPTHETPFDVWKKVIAVNL 120
Db
        121 NGVFLLDKLAINYWLEKSKPGVIVNMGSVHSFVAAPGLAHYGAAKGGVKLLTQTLALEYA 180
Qу
            121 NGVFLLDKLAINYWLEKSKPGVIVNMGSVHSFVAAPGLAHYGAAKGGVKLLTOTLALEYA 180
Db
        181 SHGIRVNSVNPGYISTPLIDEVPKERLDKLVSLHPIGRLGRPEEVADAVAFLCSOEATFI 240
Qу
            181 SHGIRVNSVNPGYISTPLIDEVPKERLDKLVSLHPIGRLGRPEEVADAVAFLCSQEATFI 240
Db
Qу
        241 NGVSLPVDGGYTAQ 254 ·
            Db
        241 NGVSLPVDGGYTAO 254
RESULT 2
AAB49773
    AAB49773 standard; protein; 254 AA.
XX
AC
    AAB49773;
XX
DT
    23-APR-2001 (first entry)
XX
DE
    Protein with acetylpyridine derivative reducing action.
XX
KW
    Optically-active pyridineethanol derivative; asymmetric reduction.
XX
OS
    Candida maris.
XX
PN
    WO200105996-A1.
XX
PD
    25-JAN-2001.
XX
PF
    28-JUN-2000; 2000WO-JP004237.
XX
PR
    21-JUL-1999;
                 99JP-00206503.
XX
PA
    (KANF ) KANEKA CORP.
XX
PΙ
    Kawano S, Horikawa M, Yasohara Y, Hasegawa J;
XX
DR
    WPI; 2001-159546/16.
    N-PSDB; AAF29375, AAF29376.
DR
XX
PT
    Efficient, high-yielding preparation of optically-active pyridineethanol
PT
    derivatives by stereoselectively reducing acetylpyridine derivatives e.g.
PT
    with enzyme having asymmetric reduction activity, for pharmaceutical
PT
    intermediates.
XX
PS
    Claim 14; Fig 1; 76pp; Japanese.
XX
CC
    This invention relates to a process for producing optically-active
```

```
CC
    pyridineethanol derivatives by stereoselectively reducing acetylpyridine
CC
    derivatives with an enzyme or enzyme source having asymmetric reduction
CC
    activity. The process is efficient and high yielding to give R and S
CC
    isomers by suitable manipulation. The method is for the preparation of
CC
    optically-active pyridineethanol derivatives by stereoselectively
CC
    reducing acetylpyridine derivatives, and also similarly for their
CC
    polycyclic analogues, for use as pharmaceutical and agrochemical
    intermediates, as well as in fine chemical production. The present
CC
CC
    sequence represents the amino acid sequence of the enzyme used in the
CC
    process which has acetylpyridine derivative reducing action
XX
SO
    Sequence 254 AA;
 Query Match
                      72.7%; Score 944; DB 4; Length 254;
 Best Local Similarity
                      69.7%; Pred. No. 2.4e-84;
 Matches 177; Conservative 36; Mismatches 41; Indels
                                                        0; Gaps
                                                                  0:
Оv
          1 MSYNFHNKVAVVTGALSGIGLSVAKKFLOLGAKVTISDVSGEKKYHETVVALKAONLNTD 60
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Db
Qу
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            121 DGVFMLDKLAAQYFLSKNKPGAIVNMGSIHSYVAAPGLSHYGAAKGGLKLLTQTMALEYA 180
Db
        181 SHGIRVNSVNPGYISTPLIDEVPKERLDKLVSLHPIGRLGRPEEVADAVAFLCSOEATFI 240
QУ
            Db
        181 AKGIRVNSVNPGYIKTPLLDICPKEHMDYLITOHPIGRLGKPEEIASAVAFLCSDEATFI 240
        241 NGVSLPVDGGYTAQ 254
Qу
            Db
        241 NGISLLVDGGYTAR 254
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

		용				
Result		Query				
No.	Score	Match	Length	DB	ID	Description
1	1298	100.0	254	 2	US-09-978-758-2	Sequence 2, Appli
2	586.5	45.2	257	2	US-09-543-681A-6362	Sequence 6362, Ap
3	503.5	38.8	309	2	US-09-248-796A-16823	Sequence 16823, A
4	494.5	38.1	261	2	US-09-468-738A-29	Sequence 29, Appl
5	494.5	38.1	261	2	US-09-940-019-29	Sequence 29, Appl
6	494.5	38.1	261	2	US-09-940-037A-29	Sequence 29, Appl
7	494.5	38.1	261	2	US-09-305-390-18	Sequence 18, Appl
8	477.5	36.8	263	2	US-09-710-279-204	Sequence 204, App
9	472.5	36.4	267	2	US-09-134-001C-5042	Sequence 5042, Ap
10	470.5	36.2	251	2	US-09-648-004-20	Sequence 20, Appl
11	470.5	36.2	251	2	US-10-272-419-20	Sequence 20, Appl
12	453.5	34.9	261	2	US-10-004-115B-36	Sequence 36, Appl
13	440	33.9	252	2	US-08-822-322-8	Sequence 8, Appli
14	440	33.9	252	2	US-09-466-109-8	Sequence 8, Appli
15	425	32.7	277	2	US-09-543-681A-8037	Sequence 8037. Ap

Database :

UniProt_05.80:*

1: uniprot_sprot:*
2: uniprot_trembl:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

		ક				
Result		Query				
No.	Score	Match	Length	DB	ID	Description
		47.7	247		001311C D3 CCD	001-000 hand llan
1	619.5			2	Q81AU6_BACCR	Q81au6 bacillus ce
2	577	44.5	246	2	Q8G0H2_BRUSU	
3	511.5	39.4	262	2	Q5A1C0_CANAL	Q5a1c0 candida alb
4	504.5	38.9	262	2	Q5FK32_LACAC	. Q5fk32 lactobacill
5	494.5	38.1	261	1	DHG_BACSU	P12310 bacillus su
6	491.5	37.9	261	1	DHGA_BACME	P10528 bacillus me
7	490	37.8	244	2	Q8ELC2_OCEIH	Q8elc2 oceanobacil
8	488.5	37.6	261	1	DHG4_BACME	P39485 bacillus me
9	485.5	37.4	261	2	Q632X4_BACCZ	Q632x4 bacillus ce
10	484.5	37.3	261	2	Q81KM8_BACAN	Q81km8 bacillus an
11	482.5		261	1	DHG3_BACME	P39484 bacillus me
12	478.5	36.9	261	2	Q4MVK1_BACCE	Q4mvk1 bacillus ce
13	478.5		263	2	Q5HLZ1_STAEQ	Q5hlz1 staphylococ
14	477.5	36.8	261	1	DHG2_BACME	P39483 bacillus me
15	477.5		261	2	Q6HCG4_BACHK	Q6hcg4 bacillus th
16	477.5	36.8	261	2	Q9F2A6_BACLI	Q9f2a6 bacillus li
17	477.5	36.8	261	2	Q65HM4_BACLD	Q65hm4 bacillus li
18	474.5		261	2	Q5BMD7_BACME	Q5bmd7 bacillus me
19	473.5	36.5	259	2	Q831W5_ENTFA	Q831w5 enterococcu
20	473.5	36.5	261	2	Q5BMD8_BACME	Q5bmd8 bacillus me

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

		%				
Result		Query				•
No.	Score	Match	Length	DB	ID	Description
1	494.5	38.1	261	 2	D69629	glucose 1-dehydrog
2	491.5	37.9	261	1	S00812	glucose 1-dehydrog
3	488.5	37.6	261	2	I40225	glucose 1-dehydrog
4	482.5	37.2	261	2	I40224	glucose 1-dehydrog
5	477.5	36.8	261	2	I39853	glucose 1-dehydrog
6	471.5	36.3	255	1	S39737	glucose 1-dehydrog
7	455.5	35.1	261	2	A33528	glucose 1-dehydrog
8	454.5	35.0	261	2	JS0385	glucose 1-dehydrog
9	448	34.5	262	2	S02299	glucose 1-dehydrog
10	448	34.5	272	2	AG3359	glucose 1-dehydrog
11	446.5	34.4	263	2	S01227	glucose 1-dehydrog
12	422.5	32.6	255	2	G82644	2,5-dichloro-2,5-c
13	420.5	32.4	258	2	G69755	glucose 1-dehydrog
14	418.5	32.2	269	2	AE2285	glucose 1-dehydrog
15	413.5	31.9	250	1	S47054	probable dehydroge
16	404.5	31.2	251	2	G72389	oxidoreductase, sh
17	396	30.5	246	2	A69621	3-oxoacyl-[acyl-ca
18	395.5	30.5	245	2	AE3517	3-oxoacyl-(acyl-ca
19	393	30.3	257	2	A72395	oxidoreductase, sh
20	391.5	30.2	271	2	AG3285	3-hydroxybutyrate